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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,774	01/16/2004	Bernard Hill	426.54	6303

27019 7590 10/17/2006

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EXAMINER
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TORRES VELAZQUEZ, NORCA LIZ

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 10/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/758,774

**Applicant(s)**

HILL ET AL.

**Examiner**

Norca L. Torres-Velazquez

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,4-23,26-67,69-83,85-107 and 109-124 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-23,26-67,69-83,85-107 and 109-124 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 19, 2006 has been entered.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1, 4-23 and 26-40 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Independent claim 1 now recites “*wherein said substrate does not comprise nodulated abrasive fiber remnants*”. The presently claimed negative limitation does not have basis in the original disclosure. Claims 4-23 and 26-40 are rejected as being dependent on independent claim 1. It is noted that [a]ny negative limitation or exclusionary proviso must have basis in the original disclosure. If alternative elements are positively recited in the specification, they may be explicitly excluded in the claims. See *In re Johnson*, 558 F.2d 1008, 1019, 194 USPQ 187, 196 (CCPA 1977) (“[the] specification, having described the whole, necessarily

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described the part remaining.”). See also *Ex parte Grasselli*, 231 USPQ 393 (Bd. App. 1983), *aff’d mem.*, 738 F.2d 453 (Fed. Cir. 1984). The mere absence of a positive recitation is not basis for an exclusion. Any claim containing a negative limitation which does not have basis in the original disclosure should be rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. See MPEP 2173.05(i)

4. Claims 83, 85-107 and 109-124 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is not sufficient support in the original claims and the disclosure for the now claimed range that requires the coefficient of static friction to be less than 0.900.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 41, 43-44, 49-50, 52,53, 55-57, 60-61, 74-79, 83, 85-86, 91-92, 94-95, 97-99, 102-103 and 116-121 are rejected under 35 U.S.C. 102(b) as being anticipated by ANNIS et al. (WO 97/21865).

ANNIS et al. discloses an abrasive nonwoven fibrous web useful as a dry or wet abrasive wipe or towel for the removal of dirt or grease. (Page 1) The reference teaches using a blend of natural pulp and man-made fibers with the thermoplastic component of the fiber furnish. The

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synthetic or man-made fibers are typically of two types: strength imparting fibers and bonding fibers. (page 7, lines 1-3, 17-19) The furnish contains about 5 –20 % by weight of the synthetic materials. (Page 8, lines 1-3) The reference teaches using bicomponent fibers. (Page 8, line 16) The reference also teaches the use of binder material. (Page 12, lines 4-7) The reference teaches using a papermaking process. (Page 17, Example 1) The reference further teaches that the concentration of the abrasive fiber remnants (formed by thermoplastic fibers) decreases across the thickness of the web material providing a fiber remnant gradient across the web. (Abstract) It is further noted that on Table III, the reference shows values that meet the presently claimed tensile, static and kinetic friction coefficients of the present invention. (page 18) With regard to the recited intended use limitations in claims 11-16, 55-58 and 95-100, it is the position of the Examiner that since prior art or record meets all of the structural limitations there is nothing on record to evidence that the cleaning sheet taught by HAYASE et al., would not function in the desired capacity. Applicant is invited to evidence otherwise. It is further noted that it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ 2d 1647 (1987).

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-6, 7-19, 32-37, 41-48, 49-61, 74-79, 83-103 and 114-121 are rejected under 35 U.S.C. 103(a) as being unpatentable over HAYASE et al. (US 2002/0106478 A1) in view of TRAPASSO (US 4,172,173).

HAYASE et al. discloses a cleaning sheet, which comprises 10 to 90% by weight of thermoplastic fibers having a fineness of 10 to 150 dtex [9.01 – 135 denier; 1.11 tex=10 denier]. The cleaning sheet further comprises 10 to 90%, preferably 10 to 70% by weight of cellulosic fibers. (Abstract; [0026]) The thick thermoplastic fiber 2 includes conjugate fibers, such as core/sheath type or side-by-side type. [0027] The reference further teaches heat-fusible fibers having a fineness of about 0.5 to 5 dtex, relatively thinner than the thick thermoplastic fibers 2, in addition to the thick thermoplastic fiber 2 and the cellulosic fiber (3). Presence of such heat-fusible fiber is effective in preventing the thick thermoplastic fibers 2 from falling off and in improving scraping properties. The heat-fusible fiber is 1 to 50% by weight. [0036] The reference teaches using an air-lay method and bonding the fibers of the air-laid web by fusion or with a binder. Useful binders include acrylonitrile-butadiene rubber, styrene-butadiene rubber, polyvinyl acetate, and ethylene-vinyl acetate copolymer and polyacrylate. [0037] Figure 4 shows one of the embodiments in which the thick thermoplastic fibers may be distributed with a gradient in the thickness direction. The cleaning sheet 1 can have the thick thermoplastic fibers in a larger amount in one side thereof than in the other side. [0069] HAYASE et al. further teaches that the cleaning sheet can be used either as a dry sheet free of liquid or a wet sheet impregnated or sprayed with liquid such as an aqueous detergent. [0040] The reference further teaches the use of surface active agents (surfactants). [0042-0043]

The Examiner equates the thick thermoplastic fibers of the reference to the claimed bicomponent fibers of the present invention; the heat-fusible binder fiber to the claimed thermoplastic fibers of about 2 to 6 denier and the cellulosic fibers of the reference meet the claimed range of the present invention.

With regards to the recited intended use limitations in claims 11-16, 55-58 and 95-100, it is the position of the Examiner that since prior art or record meets all of the structural limitations there is nothing on record to evidence that the cleaning sheet taught by HAYASE et al., would not function in the desired capacity. Applicant is invited to evidence otherwise. It is further noted that it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ 2d 1647 (1987). It is the Examiner's position that the same applies to the cleaning sheet of HAYASE et al.

While HAYASE et al. teaches the use of acrylonitrile-butadiene rubber, styrene-butadiene rubber, polyvinyl acetate, ethylene-vinyl acetate copolymer, and polyacrylate as useful binders [0037], it fails to teach the use of a latex binder.

TRAPASSO et al. relates to enhanced ethylene-vinyl acetate latex compositions useful as binders for non-woven fabrics. (Col. 2, lines 43-45) The reference teaches that the nonwoven products of their invention are used as wiping cloths, among others. (Col. 2, lines 16-19) The reference discloses that commonly used lattices for non-woven fabrics are prepared from polymer of butadiene-styrene, butadiene-acrylonitrile, vinyl acetate, acrylic monomers, among others, but these have the drawback of cost. (Col. 2, lines 3-7) The reference teaches the use of

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enhanced ethylene-vinyl acetate binder latex compositions that are less expensive than those commonly used lattices and that produces softer non-woven fabrics. (Col. 2, lines 33-40)

Since TRAPASSO et al. is also directed to the construction of nonwoven materials suitable for wiping cloths, the purpose disclosed by TRAPASSO et al. would have been recognized in the pertinent art of HAYASE et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the type of binder used by HAYASE and provide with the latex binder of TRAPASSO et al. instead with the motivation of providing the nonwoven with a binder which produce non-woven fabric with a better "hand" as disclosed by TRAPASSO et al. (Col. 2, lines 33-39).

Although HAYASE et al. in combination with TRAPASSO et al. do not explicitly teach the claimed coefficients of static friction and kinetic friction it is reasonable to presume that these properties are inherent to cleaning sheet of HAYASE et al. as modified by TRAPASSO et al. Support for said presumption is found in the use of like materials (i.e. the cleaning sheet is formed from similar contents of the different fibers and is made by an air-lay method). The burden is upon Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed properties of static and kinetic friction would obviously have been present once the HAYASE et al. product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977) as to the providing of this rejection made above under 35 USC 102.



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9. Claims 20-23, 26-31, 62-67, 69-73, 104-107 and 109-115 are rejected under 35 U.S.C. 103(a) as being unpatentable over HAYASE et al. and TRAPASSO as applied above, and further evidenced by ADAM et al. (US 5,811,178).

While HAYASE et al. is silent to the bulk density of the cleaning sheet, it is the Examiner's position that the values claimed herein are recognized to be within the skill of one practicing in the art of cleaning wipes. This is evidenced by ADAM et al. that discloses a high sorbency nonwoven fabric used in the construction of oil wipes and teaches that the bulk density of the materials is generally within the range of up to about 0.1 g/cc, preferably up to about 0.06 g/cc. (Col. 2, lines 53-55)

10. Claims 38-40, 80-82 and 122-124 are rejected under 35 U.S.C. 103(a) as being unpatentable over HAYASE et al. and TRAPASSO as applied above, and further in view of KILKENNY et al. (US 2003/0100465 A1).

HAYASE et al. is silent to the use of super-absorbent material.

KILKENNY et al. teaches cleaning wipes that include air-laid nonwoven web materials that can be made from a blend of wood pulp and synthetic fibers, bonded by binder. The reference teaches that the cleaning wipe can include super-absorbent material. (Page 3, first column)

Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the material of HAYASE et al. and provide with super-absorbent material with the motivation of enhancing the fluid retention of the material during use.

***Response to Arguments***

11. The rejection of claims 1, 4-23 and 26-40 over ANNIS has been withdrawn since ANNIS teaches away from the use of latex binder (Page 12, line 20).

12. Applicant's arguments filed September 19, 2006 have been fully considered but they are not persuasive.

a. Applicants argue that HAYASE does not disclose both the combination of thicker thermoplastic fibers of 2 to 6 denier and thermal bonding bicomponent fibers.

The Examiner does not agree with Applicants assertion, it is noted that the reference teaches heat-fusible fibers of 0.5-5 dtex in addition to the thick thermoplastic fibers that include bicomponent fibers. (Refer to paragraph 8 above)

b. With regards to the ANNIS reference, Applicants argue that it fails to teach a ratio of the coefficient of static friction to the coefficient of kinetic of greater than about 1.5.


Applicants arguments are noted. While the examples disclosed by the reference show values lower than the claimed 1.5, the reference also discloses that these measurements are used as a guide for measuring abrasiveness (Refer to page 16) and the type of fiber (and fiber denier) and the applied heat treatment has an effect on these values. Therefore, it is the Examiner's position that "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) It would have been obvious to optimize the conditions in the production of the material such that it is more abrasive so that the coefficient of static friction is higher during testing indicating that the material has more abrasiveness.

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13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Norca L. Torres-Velazquez whose telephone number is 571-272-1484. The examiner can normally be reached on Monday-Thursday 8:00-5:00 pm and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Norca L. Torres-Velazquez  
Primary Examiner  
Art Unit 1771

October 12, 2006